



san joaquin county & DELTA WATER QUALITY COALITION

November 16, 2016

Pamela Creedon, Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Ms. Creedon,

The San Joaquin County and Delta Water Quality Coalition (SJCDWQC or Coalition) is submitting a request for the completion of management plans for specific constituents from selected site subwatershed and from the site's Management Plan Monitoring (MPM) schedule. Justification for the request is provided through the four requirements outlined in the WDR (R5-2014-0029-R1), Appendix MRP-1, Page 9 per each site subwatershed in the attached letter. Monitoring results for each site/constituent included in this letter are provided in Appendix I.

The six sites (8 constituents) listed below meet the four requirements for management plan completion. If approved, the Coalition will remove site specific constituent management plans and MPM for:

- Duck Creek @ Hwy 4 (water column toxicity to *C. dubia* and sediment toxicity to *H. azteca*)
- Kellogg Creek along Hoffman Ln (specific conductivity)
- Lone Tree Creek @ Jack Tone Rd (chlorpyrifos)
- Sand Creek @ Hwy 4 Bypass (sediment toxicity to *H. azteca*)
- Terminous Tract Drain @ Hwy 12 (sediment toxicity to *H. azteca*)
- Unnamed Drain to Lone Tree Creek @ Jack Tone Rd (diuron and sediment toxicity to *H. azteca*)

Respectfully,

A handwritten signature in black ink, appearing to read "Michael L. Johnson", written in a cursive style.

Michael L. Johnson
Technical Program Manager

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INTRODUCTION

Management Plan Monitoring (MPM) is conducted as part of the Coalition's management plan strategy to identify contaminant sources and evaluate the efficacy of management practices in improving water quality. Management plans are required as a result of a single exceedance of the Water Quality Trigger Limit (WQTL) of a Total Maximum Daily Load (TMDL) constituent (dissolved oxygen (DO), specific conductance (SC), boron, chlorpyrifos, and diazinon), or more than one exceedance in a three-year period of the WQTL for any other constituent. When a constituent becomes the focus of the SJCDWQC Management Plan, the Coalition initiates actions to address the exceedances including focused outreach and MPM during months of high pesticide use.

With the adoption of the WDR, the frequency of monthly monitoring and the scheduling of MPM during months of past exceedances were modified as described in WDR Attachment A page 14: "The previous requirement to monitor monthly resulted in monitoring during months in which no problems would be expected and infrequent monitoring during peak periods when potential problems could occur. The third-party will be required to evaluate pesticide use patterns and peak times when pesticides from irrigated agriculture operations may cause problems in surface water. Based on that evaluation, the third-party will propose a frequency and time period to conduct monitoring that will adequately characterize surface waters receiving irrigated agricultural waste discharges." Therefore, the MPM schedules proposed/approved in the Coalition's MPU reports are based on months of peak pesticide use. Furthermore, page 9 of the WDR Appendix MRP-1 indicates: "demonstration of management plan completion must include consideration of periods of peak use and/or periods when a parameter is likely to be present." Appendix I of this letter includes tabulated results for all monitoring that has taken place within three years for the constituents and sites the Coalition is proposing management plan completion. In some cases monitoring occurred during months of past exceedances because of high pesticide use during that month, in other cases, applications of pesticides shifted to different months and monitoring was adjusted according to the patterns in pesticide use. The SJCDWQC Management Plan (approved November 24, 2015) includes a flow chart which describes the process by which the Coalition conducts monitoring, identifies sources, conducts outreach, and evaluates management practices.

In 2007, the Coalition initiated general outreach to growers including information about management practices that could be implemented to reduce the impact of agriculture on water quality. Focused outreach began in 2008 and water quality data were collected to document improved water quality annually. The Coalition continues to provide general outreach to all members within the Coalition region. Through grower notifications and meetings, the Coalition informs members of water quality results, management practices to eliminate water quality impairments, availability of funding for management practice implementation, results of studies of management practice efficacy, and management practice implementation and tracking activities.

Through analysis of monitoring data, the Coalition determined there is sufficient evidence to request the completion of eight management plans from the six site subwatersheds listed in Table 1.

Table 1. SJCDWQC sites and constituents proposed for management plan completion.

SITE SUBWATERSHED	YEARS OF FOCUSED OUTREACH	SC*	CHLORPYRIFOS	DIURON	C. DUBIA TOXICITY	H. AZTECA TOXICITY	TOTAL
Duck Creek @ Hwy 4	2008-2010, 2017-2019				X	X	2
Kellogg Creek along Hoffman Ln	2012-2014	X					1
Lone Tree Creek @ Jack Tone Rd	2008-2010, 2016-2018		X				1
Sand Creek @ Hwy 4 Bypass	2012-2014					X	1
Terminus Tract Drain @ Hwy 12	2011-2013, 2016-2018					X	1
Unnamed Drain to Lone Tree Creek @ Jack Tone Rd	2008-2010, 2016-2018			X		X	2
Total		1	1	1	1	4	8

*Monitoring for field parameters will continue to occur on all sampling events.

This proposal to complete management plans is justified using available laboratory results through September 2016. Preliminary laboratory results were used from September 2016 to justify management plan completion, if available. The Coalition will include all tabulated monitoring results for the 2016 Water Year (WY) in the 2017 Annual Report.

To support the Coalition's request, tabulated monitoring results for the relevant three years of monitoring required are provided in an Excel file (Appendix I) for each site/constituent. These data document improved water quality due to successful outreach and education. The section key in Table 2 includes the requirements for management plan completion as outlined in the WDR (R5-2014-0029-R1), Appendix MRP-1, Page 9 and corresponding sections per each sites subwatershed.

Table 2. Management plan completion section key.

Requirements for Management Plan Completion: as outlined in the WDR for Growers Within the San Joaquin County and Delta Area That Are Members of A Third-Party Group (Order No. R5-2014-0029-R1)		Section Name/Location
1. Demonstration through evaluation of monitoring data that the water quality impairment is no longer occurring (i.e., 3 or more years with no exceedances during the times of the year when previous exceedances occurred ¹) or demonstrated compliance with the WDR's surface and groundwater receiving water limitations.		<ul style="list-style-type: none">• Subwatershed Overview and Monitoring History,• Constituent Monitoring Results and Sourcing
2. Documentation of education and outreach to applicable members in the watershed where water quality impairment occurred.		<ul style="list-style-type: none">• Summary of Outreach
3. Documentation of member implementation of management practices that address the water quality exceedance.		<ul style="list-style-type: none">• Management Practices Implemented
4. Demonstration that the management practices implemented by members are effective in addressing the water quality impairment.		<ul style="list-style-type: none">• Justification to Complete Management Plans for Constituents• Future Monitoring

¹ With the adoption of the WDR, the scheduling of MPM during months of past exceedances has been replaced with months of peak pesticide use. Page 9 of the WDR Appendix MRP-1 indicates demonstration of management plan completion much include consideration of periods of peak use and/or periods when a parameter is likely to be present.

SUPPORTING DOCUMENTATION FOR MANAGEMENT PLAN COMPLETION

DUCK CREEK @ HWY 4

1. Demonstration through evaluation of monitoring data that water quality impairment is no longer occurring
-

Constituents Requested to Remove from Management Plan

- Water column toxicity to *C. dubia*
- Sediment toxicity to *H. azteca*

Subwatershed Overview and Monitoring History

Duck Creek @ Hwy 4 is a Represented site located in Zone 2. Monitoring began in 2005, with MPM beginning in 2009 following the initiation of focused outreach in the site subwatershed in 2008.

Constituent Monitoring Results and Sourcing

Monitoring results used to justify management plan completion due to at least three years of monitoring with no exceedances are included in Appendix I for all constituents listed below.

Water column toxicity to *C. dubia*

Toxicity to *C. dubia* has occurred in five samples collected from Duck Creek @ Hwy 4 (Appendix I). All five toxicities at Duck Creek @ Hwy 4 were attributed to exceedances of the WQTL for chlorpyrifos in the corresponding water samples. Since the last toxicity in September 2011, the Coalition has monitored for toxicity to *C. dubia* at Duck Creek @ Hwy 4 during 24 sampling events from 2012 through the 2016 WY; no toxicity occurred (Appendix I). The Coalition also monitored for chlorpyrifos during all 24 sampling events; there was one exceedance in April 2015 (0.016 µg/L), but the concentration in the sample was not high enough to cause toxicity to *C. dubia*.

Sediment toxicity to *H. azteca*

Toxicity to *H. azteca* has occurred in three sediment samples collected from Duck Creek @ Hwy 4 between 2010 and 2013 (Appendix I). The chemistry analysis for the September 2010 and March 2012 toxicities (17% and 68% survival compared to the control, respectively) indicated detections of chlorpyrifos and bifenthrin in both sediment samples. The chemistry analysis for the September 2012 toxicity (0% survival compared to the control) indicated detections of bifenthrin, chlorpyrifos, lambda cyhalothrin, and esfenvalerate/fenvalerate in the sediment samples. Since the last toxicity in September 2012, the Coalition has monitored for toxicity to *H. azteca* at Duck Creek @ Hwy 4 during eight sampling events from 2013 through the 2016 WY; no sediment samples were toxic.

2. Documentation of education and outreach to applicable members in the watershed where water quality impairment occurred

Summary of Outreach

The Coalition conducted focused outreach in the Duck Creek @ Hwy 4 site subwatershed from 2008 through 2010. Due to recurring exceedances of the WQTL for chlorpyrifos, additional outreach was conducted with 12 growers in 2010 and three growers in 2012. Following additional focused outreach, all three growers indicated discontinued use of chlorpyrifos, implementation of management practices to control runoff, and management of pesticide applications. The Coalition will include the Duck Creek @ Hwy 4 site subwatershed in the 2017 Focused Outreach set, which is planned for 2017 through 2019.

3. Documentation of member implementation of management practices that address the water quality exceedance

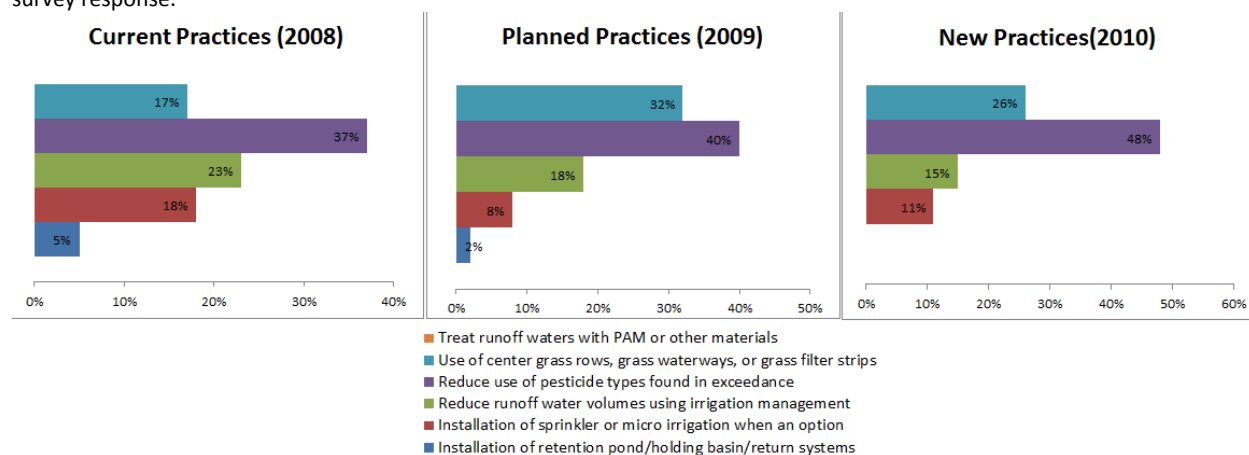
The complete analysis of management practices implemented in the Duck Creek @ Hwy 4 site subwatershed was reported in the SJCDWQC 2011 MPUR; all management practice information obtained during additional focused outreach in 2012 was reported in the 2013 MPUR. Results from the analyses are summarized in the section below.

Management Practices Implemented

Growers in the site subwatershed already applied management practices to address runoff management or pesticide application management). Follow-up surveys indicated the two most common implemented practices after focused outreach were 1) reduce use of pesticides found in exceedances and 2) use of center grass rows, grass waterways, or grass filter strips (Figure 1).

Figure 1. Duck Creek @ Hwy 4 summary of management practices.

Percentage based on acreages associated with a specific practice compared to the summed acreages with all practices for each survey response.



4. Demonstration that the management practices implemented by members are effective in addressing the water quality impairment

Justification to Complete Management Plans for Constituents from Duck Creek @ Hwy 4

The Coalition's focused outreach and management practice tracking strategy was effective at improving water quality in the Duck Creek @ Hwy 4 site subwatershed as shown by no toxicity to *C. dubia* or *H. azteca* in three or more years.

Water column toxicity to *C. dubia*

The proposal to complete the management plan for water column toxicity to *C. dubia* at Duck Creek @ Hwy 4 is justified based on monitoring results from 2012 through the 2016 WY. The Coalition has accrued more than three years of monitoring data with no toxicity. Therefore, the Coalition requests the completion of the management plan and MPM for water column toxicity to *C. dubia* in the Duck Creek @ Hwy 4 site subwatershed.

Sediment toxicity to *H. azteca*

The request to complete the management plan for sediment toxicity to *H. azteca* at Duck Creek @ Hwy 4 is justified based on monitoring results from 2013 through the 2016 WY. Since the last toxicity in September 2012, the Coalition conducted MPM for toxicity to *H. azteca* during eight sampling events through the 2016 WY with no toxicity. The Coalition has accumulated more than three years of monitoring data with no toxicity. Therefore, the Coalition requests the completion of the management plan and MPM for sediment toxicity to *H. azteca* in the Duck Creek @ Hwy 4 site subwatershed.

Future Monitoring

Duck Creek @ Hwy 4 is a Represented site in Zone 2; monitoring will occur as outlined in the 2017 WY MPU for toxicity to *C. dubia* and *H. azteca* until approval to complete management plans is received from the Regional Board.

KELLOGG CREEK ALONG HOFFMAN LN

1. Demonstration through evaluation of monitoring data that water quality impairment is no longer occurring

Constituents Requested to Remove from Management Plan

- Specific Conductivity (SC)

Subwatershed Overview and Monitoring History

Kellogg Creek along Hoffman Ln is a Represented site located in Zone 4. Monitoring at Kellogg Creek was initiated at Kellogg Creek @ Hwy 4 in 2005 and continued through 2006. Kellogg Creek @ Hwy 4 (which is downstream of the Kellogg Creek along Hoffman Ln site) is no longer sampled due to large urban inputs.

The Kellogg Creek along Hoffman Ln site subwatershed monitoring location was established during an upstream sampling event in September 2005 in an attempt to identify the source of toxicity. Monitoring at Kellogg Creek along Hoffman Ln replaced Kellogg Creek @ Hwy 4 in 2007. The Coalition initiated MPM in this site subwatershed in 2007 and monitoring continued through the 2015 WY.

Constituent Monitoring Results and Sourcing

Monitoring results used to justify management plan completion due to three years of monitoring with no exceedances are included in Appendix I for all constituents listed below.

Specific Conductivity (SC)

On November 24, 2015, the Regional Board approved monitoring for SC according to the Basin Plan's seasonal objectives (700 µmhos/cm from April through August, and 1000 from September µmhos/cm through March). Due to this approval, a total of three exceedances of the WQTL for SC were voided; leaving three remaining exceedances. Since the last exceedance in 2006, the Coalition has monitored for SC during 57 sampling events from 2007 through the 2015 WY; no exceedances occurred (Appendix I).

2. Documentation of education and outreach to applicable members in the watershed where water quality impairment occurred

Summary of Outreach

The Coalition conducted focused outreach in the Kellogg Creek along Hoffman Ln site subwatershed from 2012 through 2014. Grower meetings were conducted in 2012 to discuss management practices to potentially reduce the offsite movement of irrigation tailwater.

3. Documentation of member implementation of management practices that address the water quality exceedance

Management practices implemented by growers do not affect SC levels in the water column. Monitoring data do not provide a clear indication of what changed the number of exceedances of the WQTLs of SC in the site subwatershed. Growers in the region use water from the Delta, which typically contains elevated levels of SC, to irrigate their crops. It is possible growers are now using groundwater to supplement their surface water supply which may lower SC levels measured in the water column.

Justification to Complete Management Plans for Constituents from Kellogg Creek along Hoffman Ln

Although the Coalition cannot pinpoint the source for lowered SC levels in the Kellogg Creek along Hoffman Ln site subwatershed, water quality has improved as indicated by the completion of the seven management plans (DO, copper, chlorpyrifos, and water and sediment toxicity).

Specific Conductivity (SC)

The proposal to complete the management plan for SC in the Kellogg Creek along Hoffman Ln site subwatershed is justified based on monitoring results from 2006 through the 2015 WY. Since the last exceedance in April 2006, the Coalition monitored for SC at Kellogg Creek along Hoffman Ln during 57 sampling events with no exceedances. The Coalition reached three years of monitoring with no exceedances in 2011, but monitoring continued during all sampling events through the 2015 WY with no exceedances. Therefore, the Coalition requests to complete the management plan for SC in the Kellogg Creek along Hoffman Ln site subwatershed.

Future Monitoring

Kellogg Creek along Hoffman is a Represented site in Zone 4; as outlined in the 2017 WY MPU (approved October 14, 2016), Kellogg Creek along Hoffman Ln is not scheduled for monitoring in the 2017 WY.

LONE TREE CREEK @ JACK TONE RD

1. Demonstration through evaluation of monitoring data that water quality impairment is no longer occurring
-

Constituents Requested to Remove from Management Plan

- Chlorpyrifos

Subwatershed Overview and Monitoring History

Lone Tree Creek @ Jack Tone Rd is a Represented site located in Zone 2. Monitoring was initiated in 2004 and MPM was initiated in 2007. Beginning in 2010, additional samples were collected for chlorpyrifos as part of a grant program through the CA Department of Pesticide Regulation (DPR). The DPR grant monitoring began in June 2010 and continued through February 2011.

Constituent Monitoring Results and Sourcing

Monitoring results used to justify management plan completion due to three years of monitoring with no exceedances are included in Appendix I for all constituents listed below.

Chlorpyrifos

Exceedances of the WQTL for chlorpyrifos occurred in 10 samples collected from Lone Tree Creek @ Jack Tone Rd (Appendix I). The Coalition petitioned to complete the management plan for chlorpyrifos in this site subwatershed in 2012, but an exceedance in July 2013 required the management plan to remain active. Since the last exceedance in July 2013 (0.026 µg/L), the Coalition has monitored for chlorpyrifos during 12 sampling events in three years; there were no detections of chlorpyrifos.

2. Documentation of education and outreach to applicable members in the watershed where water quality impairment occurred
-

Summary of Outreach

The Coalition conducted focused outreach in the Lone Tree Creek @ Jack Tone Rd site subwatershed from 2008 through 2011. In 2012, the Coalition, due to continued exceedances of the WQTL for chlorpyrifos, additional outreach was conducted with two growers, who were new to the Coalition. The Lone Tree Creek @ Jack Tone Rd site subwatershed was included in the 2016 Focused Outreach set which is occurring from 2016 through 2018.

3. Documentation of member implementation of management practices that address the water quality exceedance
-

The complete analysis of management practices implemented in the Lone Tree Creek @ Jack Tone Rd site subwatershed was reported in the SJCDWQC 2011 MPUR. All management practice information

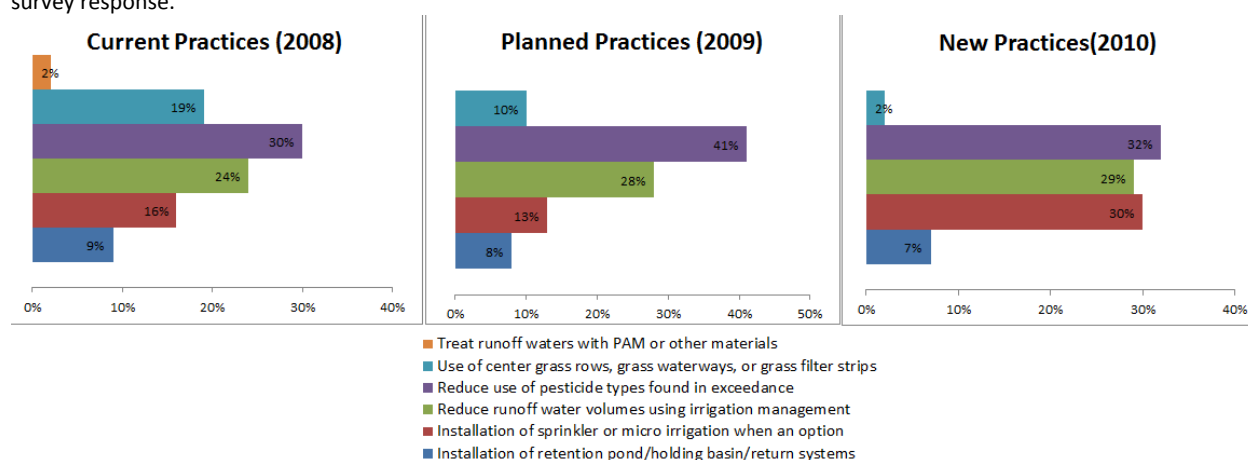
obtained during additional focused outreach in 2012 was reported in the 2013 MPUR. Results from the analyses are summarized in the section below.

Management Practices Implemented

Growers in the site subwatershed already applied management practices to address runoff management or pesticide application management). Follow-up surveys indicated the three most common implemented practices after focused outreach were 1) reduce use of pesticides found in exceedances, 2) installation of sprinkler or micro irrigation system, and 3) use of center grass rows, grass waterways, or grass filter strips (Figure 2).

Figure 2. Lone Tree Creek @ Jack Tone Rd summary of management practices.

Percentage based on acreage associated with a specific practice compared to the summed acreage with all practices for each survey response.



4. Demonstration that the management practices implemented by members are effective in addressing the water quality impairment

Justification to Complete Management Plans for Constituents from Lone Tree Creek @ Jack Tone Rd

The Coalition's focused outreach and management practice tracking strategy was effective at improving water quality in the Lone Tree Creek @ Jack Tone Rd site subwatershed as shown by no exceedances of the WQTL for chlorpyrifos in three or more years.

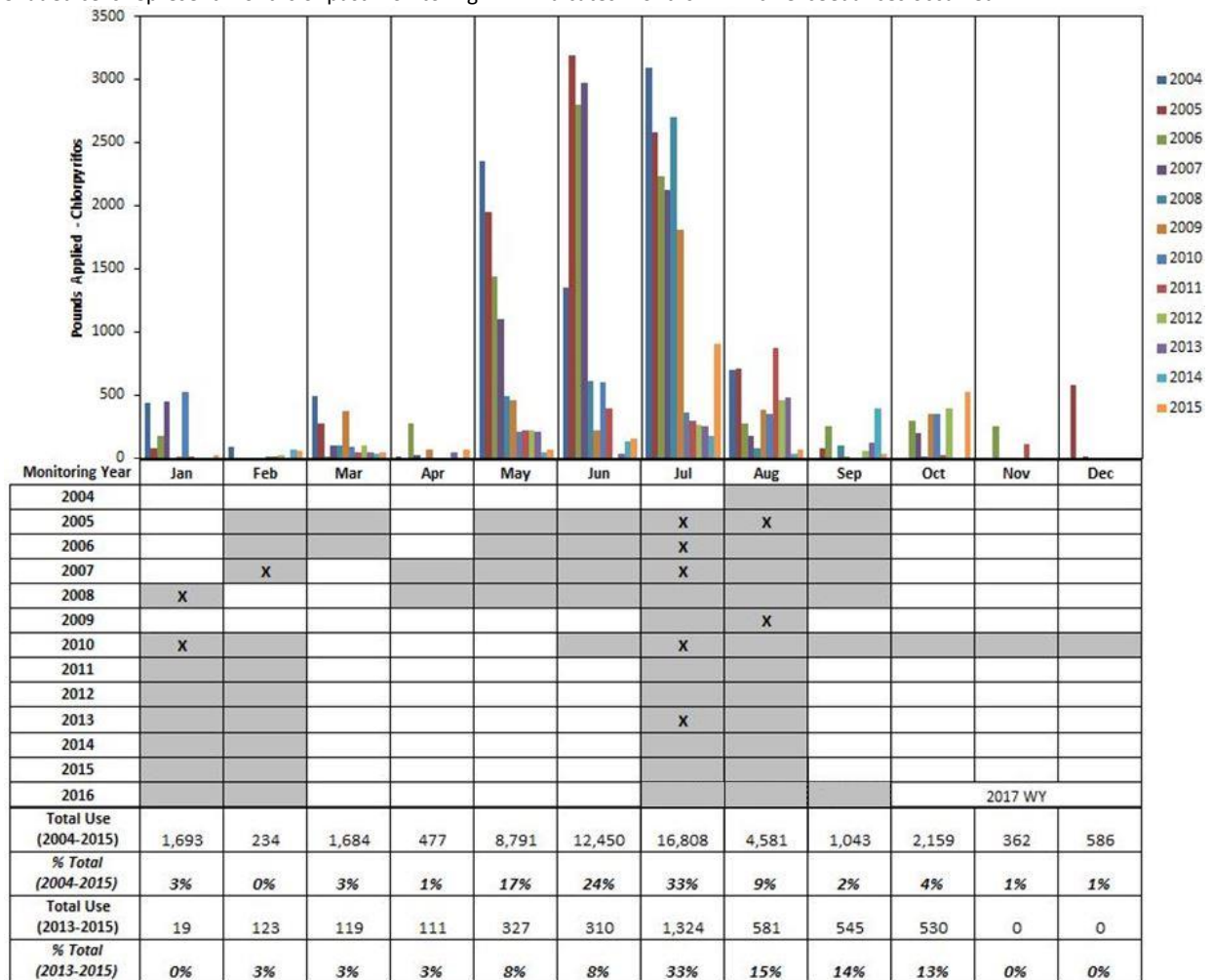
Chlorpyrifos

The proposal to complete the management plan for chlorpyrifos in the Lone Tree Creek @ Jack Tone Rd site subwatershed is justified based on monitoring data from 2013 through the 2016 WY. Since the last exceedance in July 2013, the Coalition monitored for chlorpyrifos during 12 sampling events; all samples indicated no detections of chlorpyrifos. Furthermore, the PUR data from 2006 through 2015 indicate a steady decline in applications of chlorpyrifos in the Lone Tree Creek @ Jack Tone Rd site subwatershed. From 2013 through 2015, the greatest applications occurred in July. The Coalition monitored for

chlorpyrifos during July of all three years and there were no detections (Figure 3). The Coalition expects applications of chlorpyrifos to continue to decline since the DPR designation of chlorpyrifos as a restricted material in July 2015, and focused outreach in the site subwatershed in 2016. Therefore, the Coalition requests the completion of the management plan and MPM for chlorpyrifos in the Lone Tree Creek @ Jack Tone Rd site subwatershed.

Figure 3. Lone Tree Creek @ Jack Tone Rd applications of chlorpyrifos from 2004 through 2015.

Shaded cells represent months of past monitoring. "X" indicates months in which exceedances occurred.



Future Monitoring

Lone Tree Creek @ Jack Tone Rd is a Represented site in Zone 2. Monitoring for chlorpyrifos will occur at the site as outlined in the 2017 WY MPU until approval of management plan completion is received from the Regional Board.

SAND CREEK @ HWY 4 BYPASS

1. Demonstration through evaluation of monitoring data that water quality impairment is no longer occurring

Constituents Requested to Remove from Management Plan

- Sediment toxicity to *H. azteca*

Subwatershed Overview and Monitoring History

Sand Creek @ Hwy 4 Bypass is the only sampling location in Zone 6. Over time, urban development has eliminated most of the agricultural land in this site subwatershed. The site is not scheduled for Normal Monitoring under the current WDR due to a large amount of urban influence. Monitoring began at the site in the irrigation season of 2006 and continued through the irrigation season of 2008. No monitoring occurred at this location from 2009 through 2010; MPM began during 2011 and has continued since.

Constituent Monitoring Results and Sourcing

Monitoring results used to justify management plan completion due to three years of monitoring with no exceedances are included in Appendix I for all constituents listed below.

Sediment toxicity to *H. azteca*

The first eight sediment samples collected from Sand Creek @ Hwy 4 Bypass from August 2006 through March 2012 were toxic to *H. azteca* (Appendix I). Additional chemistry analysis was performed on the March 2012 sample (63% survival compared to the control) and indicated detections of bifenthrin, cyfluthrin, lambda-cyhalothrin, cypermethrin, tralomethrin, and permethrin. Since the last toxicity in March 2012, the Coalition has monitored for sediment toxicity to *H. azteca* during nine sampling events (September 2012 through September 2016); no sediment samples were toxic.

2. Documentation of education and outreach to applicable members in the watershed where water quality impairment occurred

Summary of Outreach

The Coalition conducted focused outreach in the Sand Creek @ Hwy 4 Bypass site subwatershed from 2012 through 2014 with a single grower farming 116 acres in the site subwatershed. The grower returned a survey with current management practices and management practices planned for 2012. The Coalition followed up with the targeted grower in 2013 to assess if new practices were implemented.

3. Documentation of member implementation of management practices that address the water quality exceedance

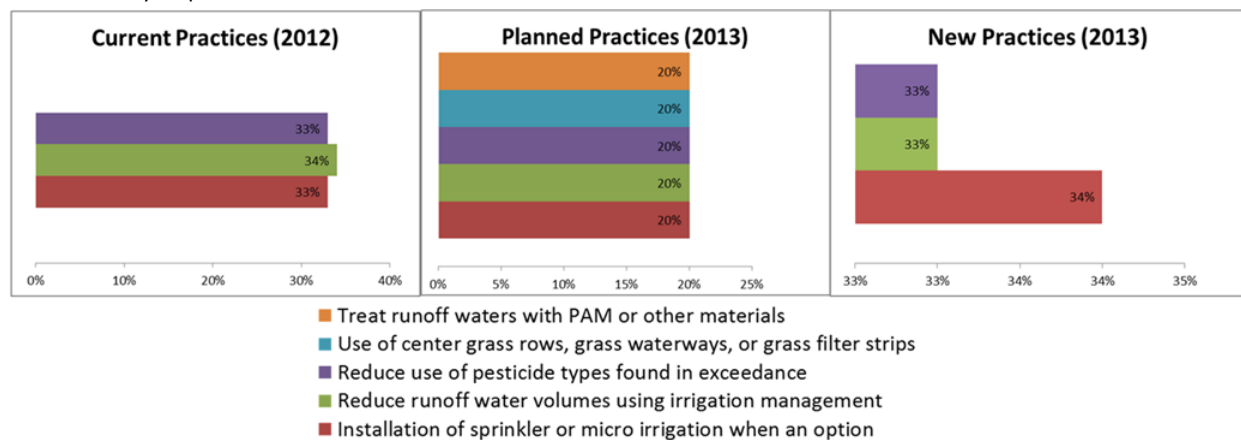
The complete analysis of management practices implemented in the Sand Creek @ Hwy 4 Bypass site subwatershed was reported in the SJCDWQC 2014 MPUR. Results from that analysis are summarized in the section below.

Management Practices Implemented

The grower in the site subwatershed already had management practices to address runoff management or pesticide application management. Follow-up surveys indicated the most common implemented practice after focused outreach was installation of sprinkler or micro irrigation system (Figure 4).

Figure 4. Sand Creek @ Hwy 4 Bypass summary of management practices.

Percentage based on acreage associated with a specific practice compared to the summed acreage associated with all practices for each survey response.



4. Demonstration that the management practices implemented by members are effective in addressing the water quality impairment

Justification to Complete Management Plans for Constituents from Sand Creek @ Hwy 4 Bypass

The Coalition's focused outreach and management practice tracking strategy was effective at improving water quality in the Sand Creek @ Hwy 4 Bypass site subwatershed as shown by no sediment toxicity to *H. azteca* in three or more years.

Sediment toxicity to *H. azteca*

The proposal to complete the management plan for sediment toxicity to *H. azteca* in the Sand Creek @ Hwy 4 Bypass site subwatershed is justified based on monitoring results from September 2012 through the 2016 WY. Since the last toxicity in March 2012, the Coalition has monitored for sediment toxicity to *H. azteca* on nine sampling events; no sediment samples were toxic.

The Coalition's focused management practice outreach and tracking strategy is effective at improving water quality. Since focused outreach began in this site subwatershed in 2012, only one sediment toxicity occurred (March 2012). Therefore, the Coalition requests the completion of the management plan and MPM for sediment toxicity to *H. azteca* in the Sand Creek @ Hwy 4 Bypass site subwatershed.

Future Monitoring

During the 2017 WY, monitoring at Sand Creek @ Hwy 4 Bypass will occur as outlined in the 2017 WY MPU; MPM is scheduled for sediment toxicity to *H. azteca* in March and September 2017 until approval of management plan completion is received from the Regional Board.

TERMINOUS TRACT DRAIN @ HWY 12

1. Demonstration through evaluation of monitoring data that water quality impairment is no longer occurring

Constituents Requested to Remove from Management Plan

- Sediment toxicity to *H. azteca*

Subwatershed Overview and Monitoring History

Terminus Tract Drain @ Hwy 12 is one of the rotating Core sites located in Zone 3. Monitoring was initiated at the site in 2005 and continued through the 2016 WY.

Two additional sites within the Terminus Tract Drain subwatershed (Delta Drain-Terminus Tract off Glasscock Rd and Delta Drain-Terminus Tract off Guard Rd) were monitored during the storm and irrigation events of 2005 through 2006, beginning in February 2005 and continuing through April of 2006. The Coalition determined in 2006 that the downstream monitoring location, Terminus Tract Drain @ Hwy 12, was representative of all of the irrigation drainage on Terminus Tract; consequently, monitoring at the two upstream locations was discontinued.

Constituent Monitoring Results and Sourcing

Monitoring results used to justify management plan completion due to three years of monitoring with no exceedances are included in Appendix I for all constituents listed below.

Sediment toxicity to *H. azteca*

Toxicity to *H. azteca* occurred twice in sediment samples collected from Terminus Tract Drain @ Hwy 12 (Appendix I). Additional chemistry analysis was performed on the September 2013 sample (48% survival compared to the control) and indicated detections of bifenthrin, chlorpyrifos, lambda-cyhalothrin, esfenvalerate, and permethrin. Since the last toxicity in September 2013, the Coalition has monitored for sediment toxicity to *H. azteca* during six sampling events; no sediment toxicity occurred.

2. Documentation of education and outreach to applicable members in the watershed where water quality impairment occurred

Summary of Outreach

The Coalition conducted focused outreach in the Terminus Tract Drain @ Hwy 12 site subwatershed from 2011 through 2013. The Coalition contacted four growers and all four growers indicated that they intended to implement new management practices in 2011. The Coalition followed up with the targeted grower in 2012 to assess if new practices were implemented. The Terminus Tract Drain @ Hwy 12 site subwatershed was included in the 2016 Focused Outreach set, which is planned for 2016 through 2018.

3. Documentation of member implementation of management practices that address the water quality exceedance

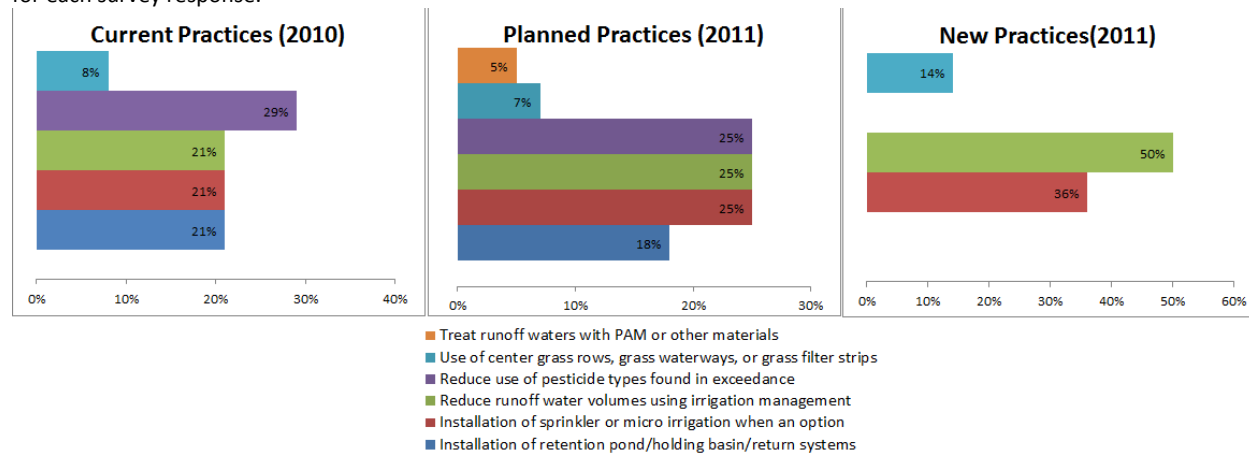
The complete analysis of management practices implemented in the Terminus Tract Drain @ Hwy 12 site subwatershed was reported in the SJCDWQC 2013 MPUR. Results from that analysis are summarized in the section below.

Management Practices Implemented

Growers in the site subwatershed already applied management practices to address runoff management or pesticide application management). Follow-up surveys indicated the two most common implemented practices after focused outreach were 1) reduce runoff water volumes using irrigation management, and 2) installation of sprinkler or micro irrigation system (Figure 5).

Figure 5. Terminus Tract Drain @ Hwy 12 summary of management practices.

Percentage based on acreage associated with a specific practice compared to the summed acreage associated with all practices for each survey response.



4. Demonstration that the management practices implemented by members are effective in addressing the water quality impairment

Justification to Complete Management Plans for Constituents from Terminus Tract Drain @ Hwy 12

The Coalition's focused outreach and management practice tracking strategy was effective at improving water quality in the Terminus Tract Drain @ Hwy 12 site subwatershed as shown by no sediment toxicity to *H. azteca* in three or more years.

Sediment toxicity to *H. azteca*

The proposal to complete the management plan for sediment toxicity to *H. azteca* in the Terminus Tract Drain @ Hwy 12 site subwatershed is justified based on monitoring results from 2014 through the 2016 WY. Since the last toxicity in September 2013, the Coalition monitored for sediment toxicity to *H.*

azteca during six sampling events; no sediment samples were toxic. Monitoring has occurred for three years with no toxicity. Therefore, the Coalition requests to complete the management plan for sediment toxicity to *H. azteca* from the Terminous Tract Drain @ Hwy 12 site subwatershed.

Future Monitoring

In the 2017 WY, Terminous Tract Drain @ Hwy 12 will rotate from a Core site to a Represented site; monitoring will occur according to the schedule outlined in the 2017 WY MPU; MPM is scheduled for sediment toxicity to *H. azteca* in March and September 2017 until approval of management plan completion is received from the Regional Board.

UNNAMED DRAIN TO LONE TREE CREEK @ JACK TONE RD

1. Demonstration through evaluation of monitoring data that water quality impairment is no longer occurring
-

Constituents Requested to Remove from Management Plan

- Diuron
- Sediment toxicity to *H. azteca*

Subwatershed Overview and Monitoring History

Unnamed Drain to Lone Tree Creek @ Jack Tone Rd is a Represented site in Zone 2. Monitoring began at the site during the irrigation season of 2006 and continued through the 2016 WY. The Coalition initiated MPM in the site subwatershed during the 2007 irrigation season.

Constituent Monitoring Results and Sourcing

Monitoring results used to justify management plan completion due to three years of monitoring with no exceedances are included in Appendix I for all constituents listed below.

Diuron

Exceedances of the WQTL for diuron occurred in four samples collected from Unnamed Drain to Lone Tree Creek @ Jack Tone Rd (Appendix I). Since the last exceedance in 2012 (2.4 µg/L), the Coalition monitored for diuron during 12 sampling events in the site subwatershed; all samples resulted in no exceedances. The Coalition petitioned to complete the management plan for diuron in this site subwatershed in 2015, but the Regional Board requested another year of monitoring; the Coalition sampled for diuron for an additional year and due to improved water quality there were still no exceedances of the WQTL for diuron.

Sediment toxicity to *H. azteca*

Toxicity to *H. azteca* has occurred in six sediment samples collected from Unnamed Drain to Lone Tree Creek @ Jack Tone Rd (Appendix I). Additional chemistry analysis performed on the September 2012 sample (10% survival compared to the control) indicated detections of bifenthrin, chlorpyrifos, lambda-cyhalothrin, esfenvalerate, fenpropathrin, and permethrin. Since the last toxicity in September 2012, the Coalition monitored for sediment toxicity to *H. azteca* during eight sampling events from 2013 through 2016; no sediment toxicity occurred.

2. Documentation of education and outreach to applicable members in the watershed where water quality impairment occurred

Summary of Outreach

The Coalition conducted focused outreach in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed from 2008 through 2010. In 2012, due to continued exceedances of the WQTL for chlorpyrifos, additional outreach was conducted in the site subwatershed with two additional growers. Both growers indicated they did not apply chlorpyrifos. The Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed was included in the 2016 Focused Outreach set, which is occurring in 2016 through 2018.

3. Documentation of member implementation of management practices that address the water quality exceedance

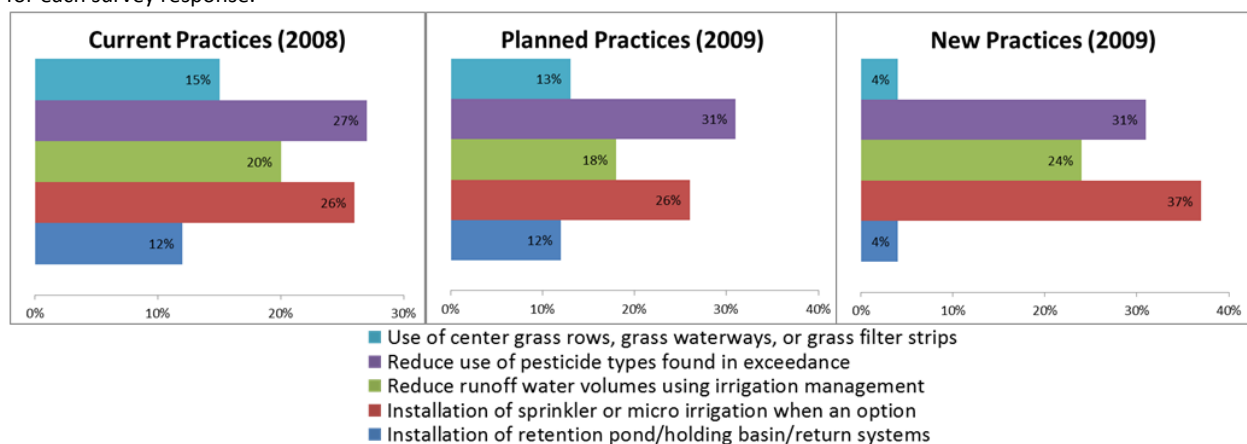
A complete analysis of management practices implemented in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed was reported in the SJCDWQC 2011 MPUR; results from additional contacts in 2012 were included in the 2013 MPUR. Results from the analyses are summarized in the section below.

Management Practices Implemented

Growers in the site subwatershed already applied management practices to address runoff management or pesticide application management). Follow-up surveys indicated the two most common implemented practices after focused outreach were 1) use of sprinkler or micro irrigation system, and 2) reduce use of pesticides found in exceedances (Figure 6).

Figure 6. Unnamed Drain to Lone Tree Creek @ Jack Tone Rd summary of management practices.

Percentage based on acreage associated with a specific practice compared to the summed acreage associated with all practices for each survey response.



4. Demonstration that the management practices implemented by members are effective in addressing the water quality impairment

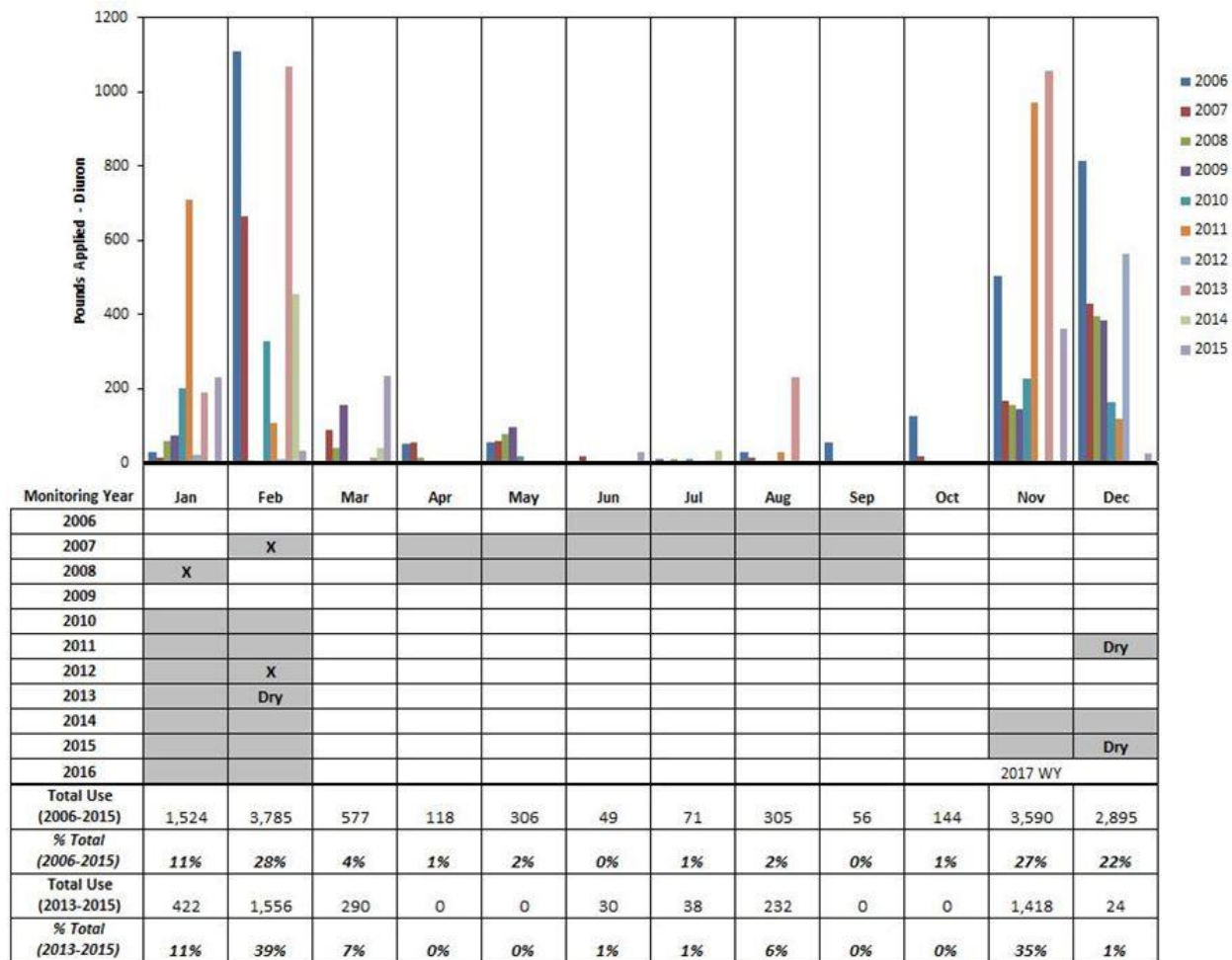
Justification to Complete Management Plans for Constituents from Unnamed Drain to Lone Tree Creek @ Jack Tone Rd

The Coalition's focused outreach and management practice tracking strategy was effective at improving water quality in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed as indicated by the lack of exceedances of the WQTL for diuron and no toxicity to *H. azteca* in three or more years.

Diuron

The proposal to complete the management plan for diuron in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed is justified based on monitoring results from 2013 through the 2016 WY. Since the last exceedance in 2012, the Coalition monitored for diuron during 12 sampling events; there were no exceedances in more than three years. Furthermore, the PUR data indicate the greatest applications of diuron in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed occurred during the winter months (November through February). The Coalition has monitored during these months since 2013 and no exceedances of the WQTL for diuron (Figure 7). Therefore, the Coalition requests the completion of the management plan and MPM for diuron in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd.

Figure 7. Unnamed Drain to Lone Tree Creek @ Jack Tone Rd applications of diuron from 2006 through 2016. Shaded cells represent months of past monitoring. "X" indicates months in which exceedances occurred.



Sediment toxicity to *H. azteca*

The proposal to complete the management plan for sediment toxicity to *H. azteca* in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed is justified based on monitoring results from 2013 through the 2016 WY. Since the last toxicity in September 2012, the Coalition monitored for sediment toxicity to *H. azteca* during eight sampling events; no sediment toxicity occurred. Therefore, the Coalition requests the completion of the management plan and MPM for sediment toxicity to *H. azteca* in the Unnamed Drain to Lone Tree Creek @ Jack Tone Rd site subwatershed.

Future Monitoring

Unnamed Drain to Lone Tree Creek @ Jack Tone Rd is a Represented site in Zone 2; monitoring will occur as outlined in the 2017 WY MPU until approval of management plan completion is received from the Regional Board.